

ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

ORIGINAL
FILE

In the matter of)
)
Redevelopment of Spectrum to)
Encourage Innovation in the)
Use of New Telecommunications)
Technologies)

ET Docket No. 92-9

COMMENTS OF TELOCATOR

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

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COMMENTS OF TELOCATOR

Telocator, the Personal Communications Industry Association ("Telocator"), submits these comments on the above referenced Notice of Proposed Rulemaking ("Notice") in the matter of establishing new areas of spectrum to be used for emerging telecommunications technologies.¹ Telocator supports the Commission's proposed rulemaking as a first step towards a spectrum allocation for emerging personal communications services (PCS). Deployment of many categories within the family of PCS cannot proceed without prompt allocation of spectrum. Uncertainty as to the ultimate frequency allocation(s) which may be assigned to PCS makes sound business decisions impossible and is delaying the commitment of manufacturing resources to PCS development. Spectrum has already been allocated for PCS and services have been licensed by the United States' global competitors in the United Kingdom, Europe and the Pacific Rim: unless a domestic spectrum allocation can be made for PCS, the United States is in jeopardy of losing its leadership position in the international wireless telecommunications marketplace.

¹FCC 92-20 (Released February 7, 1992).

Unfortunately, there is no vacant spectrum available which would allow a PCS (or other emerging technology) allocation to be made without some impact on current spectrum users. The band identified in the Notice for reallocation for emerging technologies is predominantly utilized by both private and common carrier, fixed microwave facilities. We applaud the Commission's sensitivity to the impact its proposals will have on incumbent users in the subject spectrum band and its determination to accomplish the reallocation in a manner which insulates these users from any detrimental financial, operational or economic consequences.

This issue is, for Telocator, more than merely a matter of sound public policy: the association's membership includes both PCS interests who require access to the new technologies band in order to make PCS a reality, and paging and cellular carriers who are, themselves, heavy users of fixed microwave facilities in the band. Our interests clearly lie in ensuring that both new entrants to and existing users of the band are fairly treated.

SUMMARY

An extensive and difficult series of discussions took place between Telocator's PCS and paging/cellular membership sections, searching for a means to meet the twin goals of the present rulemaking: making spectrum available for new services and protecting the legitimate interests of current users of the spectrum being reallocated for other uses. The principles set out

in these comments were unanimously approved by the association's board of directors. We are confident that an implementation of the docket, consistent with these principles, will support both of the proceeding's goals.

Cellular and paging entities with fixed microwave facilities in the emerging technologies band are no more anxious to be displaced from their current spectrum than any other incumbent user and every bit as concerned that the reallocation not result in negative impacts upon their present, planned and future operations. We are firmly convinced that the principles set out in these comments are equally valid for other affected users and fully address their situation and concerns, as well.²

The governing principles, elaborated upon in detail below, are as follows:

A Safety Net Must be Provided for Existing Users of the "Emerging Technologies" Band. No microwave operations will be discontinued if alternative facilities are not available that afford satisfactory technical performance;

A Transition Plan Framework Should be Utilized, rather than having current users' rights expire on a certain, fixed date, as proposed in the Notice;

Sliding Extensions of Current Users' Co-Primary Status Should be Provided Where There is No Initial Interest in "Emerging Technologies" Deployment, if the Commission does adopt a fixed time frame for expiration of these users' co-primary status;

²In particular, we note that our principles for implementation of this docket appear to address the issues identified by the Utilities Telecommunications Council in its position paper, "Recommended FCC Action Plan for Accommodating New Technologies," presented to the Commission staff in an ex parte meeting to discuss this proceeding, held March 24, 1992.

Government Spectrum at 1710 - 1850 MHz Should Be Considered on a Priority Basis as a relocation destination for current, 2 GHz microwave licensees;

There Should be Equal Treatment of All Existing Users in the Band;

Spectrum Sharing is a Technique for Rapid Introduction of PCS in the United States. Initial spectrum sharing is fundamental to a gradual transition to use of the band by "emerging technologies" in a manner which protects current users from significant disruptions;

Microwave and "Emerging Technologies" Licensees Should be Free to Negotiate Mutually Acceptable Agreements for spectrum accommodation or relocation;

Tax Certificates Would Encourage Accommodation of "Emerging Technologies" Services and should be pursued.

Special Concerns Are Raised in Frequencies Above 2110 MHz and care must be exercised to insure that implementation of the docket fully addresses these concerns;

Non-Licensed Uses of the Spectrum Raise Issues Warranting Special Consideration. Such uses, however, should not be excluded from consideration and work should continue to find means to address interference and accountability concerns raised for this class of services.

I. A Safety Net Must be Provided for Existing Users of the "Emerging Technologies" Band.

The designation of 220 MHz of the 1.85 to 2.20 GHz band for reallocation to "emerging technologies" was based, in part, upon a finding by the Commission that it is technically feasible to relocate fixed microwave services currently deployed in this spectrum to higher frequency bands or to alternative media.³ This finding was based upon a study by the Commission's Office of

³Notice at paragraph 20.

Engineering and Technology⁴, which assessed both the technical feasibility of alternative spectrum or media, and the availability of adequate capacity to support relocated facilities.

This finding is substantially supported by other analysis, including a study by Comsearch, which conducted a frequency coordination case study of 1.9 GHz microwave usage in Houston, Texas.⁵ Houston has the second highest concentration of microwave paths in the United States. Comsearch found that of 107 existing microwave links, all but four could be relocated to technically reliable alternative facilities in higher bands.

It must, however, be stressed that while most microwave facilities can be successfully migrated, there will be exceptions. For certain facilities, such factors as zoning or land use restrictions, terrain characteristics, or lack of availability of appropriate tower sites will make relocation of a particular 2 GHz link impossible. It is imperative that protection be afforded to users of such links.

Accordingly, Telocator urges the Commission to adopt a "safety net" provision, which guarantees that no microwave users, under any circumstances, will be required to cease its 2 GHz operations

⁴"Creating New Technology Bands for Emerging Technology," FCC/OET TS92-1 (January, 1992).

⁵"Exploring Alternate Bands for 1.9 GHz Systems," Thomas C. Berry, Brian E. Downs and Sanjay P. Gupta, Comsearch, Reston, Virginia (January 20, 1992).

unless and until suitable alternative facilities are identified and agreed to.

We believe that existing users who truly do not have viable alternatives available to them can be afforded this protection, without significantly reducing the spectrum available in the band for "emerging technologies" uses.

II. A Transition Plan Framework Should be Utilized.

The Notice contemplates that 2 GHz microwave licensees will be afforded a right to continue operating on a primary basis for a fixed period of ten to fifteen years. During this period, microwave licensees could voluntarily agree to relocate for compensation. Upon the expiration of this fixed period, however, all rights of the existing user would cease: the microwave licensees would assume secondary status and be subject to relocation without their consent or any compensation.

In lieu of this approach, Telocator proposes a transition plan framework under which microwave licensees would have the right to continue 2 GHz operations until the "emerging technologies" licensee demonstrates that technically suitable alternative facilities exist and the new entrant agrees to compensate the microwave licensee for its accommodation costs.

From the microwave licensee's perspective, this guarantees cost compensation and the availability of alternative facilities, regardless of when the need to relocate arises. It further ensures

that adequate time to accomplish the transition is allowed to them, irrespective of an arbitrary deadline date.

From the new technology entrant's perspective, this concept would allow for earlier removal of microwave licensees from the 2 GHz band where alternatives are available and the relocation can be expeditiously accomplished.

The framework for this proposal is as follows:

Microwave licensees must accommodate "emerging technology" licensee requests where a transition plan and compensation have been established and agreed to. The new technology entrant seeking to use microwave spectrum for its service(s) must provide the affected microwave licensee with notification and, upon request, a detailed transition plan and compensation commitment. The transition plan and cost commitment must include:

- The engineering plan for modifications to the system or relocation to other spectrum or facilities;
- A review of options available or considered, along with reasons for the approach selected;
- Cost estimates that include all direct and indirect costs to the microwave licensee from implementing the requested accommodation;
- Details concerning zoning, site availability, environmental and any other approvals required to effectuate the accommodation; and
- The projected time frame in which the accommodation can be implemented, considering all operational, regulatory and approval requirements.

The paging/cellular and PCS memberships of Telocator were unable to reach consensus on the time frame suitable for conducting

these negotiations and individual companies may be expected to present their own views in the comment and reply cycle of this proceeding. There was, however, agreement that the microwave licensee, under no circumstances, would be required to cease its 2 GHz operations unless and until suitable alternative facilities are implemented and tested. Disputes would be taken to mediation, at the losing parties' expense. The Commission should be the final arbiter for unresolved controversies on the procedural fairness of the negotiations.

III. Sliding Extensions of Current Users' Co-Primary Status Should be Provided Where There is No Initial Interest in "Emerging Technologies" Deployment

Existing microwave licensees should have an appropriate transition period from the time an "emerging technology" licensee seeks an accommodation until the discontinuance of its 2 GHz operations must occur. Under the Notice's proposal, in which a co-primary status expires on a fixed date, if a microwave user is first presented with a request to relocate very late into or after expiration of that period, adequate time to reach an equitable, negotiated settlement and to implement the transition would not be allowed them.

Accordingly, if the Commission does adopt a fixed time frame for expiration of existing users' co-primary status, sliding extensions of their co-primary status should be granted to microwave licensees where there has been no initial interest in use

of their frequencies by an "emerging technologies" entrant. (Such a sliding extension of co-primary status is implicit in the transition mechanism which Telocator urges the Commission to adopt, above.)

IV. Government Spectrum at 1710 - 1850 MHz Should Be Considered on a Priority Basis

The spectrum immediately below the "emerging technologies" band (between 1710 and 1850 MHz) is administered by the NTIA for licensed government fixed microwave users. This government spectrum, if it were to become available, would expand the opportunities for relocating microwave users from the "emerging technologies" band. Government spectrum at 1710 to 1850 MHz is ideally suited for relocation of microwave facilities above 1850 MHz inasmuch as it is relatively easy to engineer fixed microwave systems, of both federal and non-federal users, so as to avoid harmful interference. In particular, such spectrum could provide a workable alternative location for microwave facilities which, for terrain or other reasons, can not be successfully replaced by higher frequency facilities.

In Congress, the Committee Report which accompanied HR 531: "The Emerging Telecommunications Technologies Act of 1991," cited the inefficiency of using separate, adjacent blocks of frequencies

for comparable purposes by government and non-government users.⁶ The report stated the Congress' expectation that such inefficiencies could be "remedied expeditiously utilizing the existing authority of the FCC and NTIA."⁷ House Energy and Commerce Committee Chairman John Dingell has recently reiterated the Committee's strong interest in assisting in the process, if needed.⁸

It is Telocator's understanding that discussions are being vigorously pursued between the Commission and the NTIA to assess the feasibility of federal and non-federal microwave users sharing the 1710 to 1850 MHz band, further alleviating the impact on microwave users of the present reallocation proceeding. We strongly support the most expeditious possible resolution of this issue.

V. There Should be Equal Treatment of All Existing Users in the "Emerging Technologies" Band

The cellular and paging entities in Telocator's membership which operate fixed microwave facilities in the band identified by the Commission for reallocation for emerging technologies are engaged in important, productive and spectrally efficient uses of

⁶Report [To accompany H. R. 531, "Emerging Telecommunications Technologies Act of 1991"], Committee on Energy and Commerce, United States House of Representatives (June 18, 1991), page 16.

⁷Ibid.

⁸Letter of the Honorable John D. Dingell to the Honorable Jim Bunning, April 10, 1992.

technology. They deserve the same considerations and levels of protection as any other microwave licensee. There should not be different rights or protections adopted in this docket for different types of users.

VI. Spectrum Sharing is a Technique for Rapid Introduction of PCS in the United States

Physical relocation of facilities or relocation to other spectrum are not the only means of resolving "emerging technology" spectrum needs. Initial spectrum sharing between new entrants and existing users is fundamental to a gradual transition to use of the band by "emerging technologies" in a manner which protects current users from significant disruptions. PCS proponents understand that, in initial deployment, they must share spectrum. They view their ability to co-exist with current users as a critical factor in their ability to rapidly introduce new services. Moreover, because they will bear the expense of relocating existing users, the PCS operator's own financial and operational self interests dictate sharing to the largest extent possible and relocating current users only as a last resort and where it is absolutely necessary.

The Telocator PCS Section Technical and Engineering Committee is currently investigating several spectrum sharing techniques, including various spread spectrum overlay and frequency avoidance approaches. The association is also pursuing revisions to TIA

Technical Bulletin 10E-B (the industry standard on interference between microwave facilities) to include PCS considerations.

With careful frequency coordination and cooperation from the microwave user community, sharing will be possible. This will permit the rapid introduction of new services and the relocation of existing users on the least disruptive, gradual basis, as demand for the spectrum by the new technology service increases.

VII. Microwave and "Emerging Technologies" Licensees Should be Free to Negotiate Mutually Acceptable Agreements for Spectrum Accommodation or Relocation

Microwave and "emerging technology" licensees should be free to negotiate mutually acceptable terms and conditions at any time, for the voluntary relocation or other accommodation of the existing user. This will facilitate the early release of frequencies for "emerging technology" uses, consistent with microwave licensee interests. Commission policies should encourage marketplace negotiations and agreements between microwave and "emerging technology" licensees.

VIII. Tax Certificates Would Encourage Accommodation of "Emerging Technologies" Services

Towards the end of facilitating voluntary accommodations, the use of tax certificates would be beneficial in encouraging microwave licensees to cease or modify 2 GHz operations to accommodate new services in the "emerging technologies" band. Telocator supports Commission use of its authority to issue such

certificates, as it did in the AM radio improvement broadcast docket.

IX. Special Concerns Are Raised in Frequencies Above 2110 MHz

The narrow band microwave facilities in the Common Carrier frequencies between 2110 - 2200 MHz present some unique concerns. Higher costs and more complex technical difficulties are presented here than in the broad band frequencies (1850 to 1990 MHz). As the Commission's Office of Engineering and Technology report points out, there is a nearly three times higher density of facilities per MHz in the narrow band frequencies⁹. Half the fixed microwave equipment deployed in the narrow band is less than three years old and the average age is five years. This is significantly newer and costlier to replace than equipment deployed in the broad band¹⁰. Many cellular and paging companies are still in the process of building out their networks, utilizing the narrow band 2 GHz frequencies as intra-system links. There has, accordingly, been a higher growth rate in new microwave facilities in the narrow band than in the broad band frequencies.¹¹

Care must be exercised to insure that implementation decisions in this the docket (and subsequent service allocations in the

⁹"Creating New Technology Bands for Emerging Technology," FCC/OET TS92-1 (January, 1992), p. 8.

¹⁰Ibid., page 32

¹¹Ibid.

"emerging technologies" band) are sensitive to and fully addresses the particular concerns raised in this portion of the spectrum¹².

X. Non-Licensed Uses of the Spectrum Raise Issues Warranting Special Consideration

Some parties have questioned whether non-licensed use (for example, the "Part 16" type PCS applications discussed at the Commission's December 5, 1991, En Banc hearing on PCS) would be consistent with accountability for insuring non-interference and meeting obligations to reimburse existing licensees for accommodating such new uses. These parties have argued that non-licensed uses should be excluded from the "emerging technologies" band.

Non-licensed services, however, form a potentially significant part of the PCS marketplace. Telocator PCS Section members advocating non-licensed uses are engaged in serious efforts to develop mechanisms which fully address the interference and compensation concerns which have been raised. Non-licensed uses of the spectrum should not be excluded from consideration and work should continue to find means to address the particular concerns raised for this class of services.

¹²The PCS Section of Telocator has, in fact, determined that personal telecommunications service/telepoint services would be most appropriately deployed in the 1850 to 1990 MHz band, not the higher, narrow band frequencies between 2110 and 2220 MHz.

XI Conclusion

This rulemaking creates a vehicle for considering the issues related to the relocation and accommodation of existing users in a band appropriate to new telecommunications technologies¹³. As such, it is an important first step toward the needed PCS spectrum allocation. The Notice places appropriate importance on the issue of protecting current users from harmful disruption or financial burdens as a result of the reallocation.

Prompt enactment of the Commission's proposals, as refined in these and other comments it will receive, will clear the way for

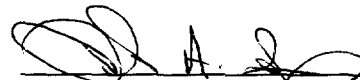
¹³As Telocator noted in its June 1, 1992, comments urging prompt action on the Utility Telecommunication Council's petition in the matter of Amendment of Parts 2, 21, and 94 to Accommodate Private Microwave Systems in the 1.71-1.85 GHz Band and in Bands Above 3 GHz (RM-7981), rechannelization of higher microwave bands will also be necessary under a 2 GHz transition plan in order to accommodate the needs of 2 GHz microwave users and, particularly, the narrow band needs of common carrier microwave systems.

making PCS a reality in a manner which fully addresses the legitimate needs and concerns of current users.

Respectfully submitted,

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